

## MVLWB Registry

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**From:** Adrian Paradis <Adrian.Paradis@aandc-aadnc.gc.ca>  
**Sent:** Monday, July 6, 2015 10:19 AM  
**To:** Fallon Morton  
**Subject:** Giant Mine Weekly Air Quality Report for the Week Ending June 27, 2015  
**Attachments:** YELLOWKN-#699735-v1-giant\_monitoring\_weekly\_air\_quality\_monitoring\_for\_june\_27\_\_2015.PDF; Adrian Paradis.vcf

A summary of the Giant Mine ambient air quality monitoring program for the week ending June 27, 2015 is as follows:

### Fenceline Network:

- No 15-minute average particulate matter less than 10 microns in diameter (PM<sub>10</sub>) concentrations measured above the established Risk Based Action Level (RBAL) criteria were measured at the fenceline monitoring stations during the week. PM<sub>10</sub> concentrations measured at fenceline locations were typical of seasonal background concentrations. Elevated particulate concentrations were observed across all stations on June 26 and 27, 2015 likely caused by smoke from regional forest fires;
- No 15-minute average total suspended particulate (TSP) concentrations above the established RBAL were measured at the fenceline monitoring stations during the week. TSP concentrations measured at fenceline locations were typical of seasonal background concentrations. Elevated particulate concentrations were observed across all stations on June 26 and 27, 2015 likely caused by smoke from regional forest fires;
- Fenceline samplers began operating 24 hours per day in support of paste and fill activities on May 31, 2015.

### Community Stations:

- There were three (3) continuous 24-hour average concentrations of particulate matter less than 2.5 microns in diameter (PM<sub>2.5</sub>) and three (3) 24-hour average concentrations of particulate matter less than 10 microns in diameter (PM<sub>10</sub>) measured above the referenced criteria at the community stations during the week. The 24-hour PM<sub>2.5</sub> and PM<sub>10</sub> concentrations above the reference criteria occurred at all stations on June 26 and 27, 2015. Winds on both June 26 and 27, 2015 were light to moderate blowing predominantly from the south placing the city of Yellowknife upwind of the mine site. Site visits on June 26 and 27, 2015 indicated smoke from regional forest fires likely influenced PM<sub>2.5</sub> and PM<sub>10</sub> concentrations on those days;
- Laboratory results from available TSP, PM<sub>10</sub>, and trace metals (including arsenic) samples collected on June 8, 2015 at the community stations were less than the analytical detection limit and/or below the referenced criteria. Laboratory analysis of community station filters collected after June 8, 2015 are pending;
- Laboratory analytical results received for asbestos samples collected on June 14, 2015 at the community stations were less than the analytical detection limit and/or below the referenced

criteria. Laboratory results from asbestos samples collected at the community stations on April 15 and after June 14, 2015 are pending;

#### Interim Underground Stabilization (IUS) (tailings work):

- Air quality monitoring specific to the IUS program was conducted at:
  1. Four (4) locations within the vicinity of paste fill operations in the B1 and A1 Pits;
  2. Four (4) locations set on the west, north, and south perimeters of the Central and South Tailings Ponds;
  3. Four (4) locations at the mine vents and intake openings.
- There were no 15-minute average PM<sub>10</sub> concentrations above the surface drilling RBAL (260 µg/m<sup>3</sup>) measured at the monitors located in the vicinity of paste fill operations during the week;
- There were no 15-minute average PM<sub>10</sub> concentrations above the tailings work RBAL (180 µg/m<sup>3</sup>) measured during the week;
- There were no 15-minute average PM<sub>10</sub> concentrations above the underground vent monitoring RBAL (300 µg/m<sup>3</sup>) measured during the week;
- Analytical 24-hour arsenic results from samples collected after June 5, 2015 are pending.

#### Roaster Deconstruction

- Roaster Deconstruction site activities were completed on June 20, 2015 and included raking of the area south of the AC Roaster and Calcine concrete slabs, bagging waste, cutting of protruding metals from concrete slabs, debris clean-up and inspections.
- Air quality monitoring associated with the Roaster Deconstruction ended on June 20 2015 and no monitoring was conducted during the week ending June 27, 2015;
- Laboratory results from 24-hour integrated samples collected on June 20, 2015 for the roaster deconstruction specific air quality monitoring program, indicated 24-hour average PM<sub>10</sub>, and TSP concentrations were below the referenced applicable criteria.

#### General Operations:

- The AQM program operated as specified during the week ending June 27, 2015 with exception of the following:
  1. The fenceline sampler at Site E experienced internal signal processing errors 5:00 AM to 12:30 PM on June 27, 2015 due to sampler internal software malfunction.
  2. The E-sampler at 1-38 Portal vent location was down from 4:00 AM to 6:15 AM on June 21, 2015, and from 3:00 AM to 6:00 am on June 23, 2015 due to external battery backup power failures.

Additional air quality information for the Giant Mine can be found on the NWT Air Quality Monitoring Network web page: <http://aqm.enr.gov.nt.ca>.

For information on RBALs, TSP, PM10 and for answers to other commonly asked questions about Air Quality Monitoring, please see the Giant Mine Remediation Project Team's [online FAQs](#). Should you have any questions or comments, please contact Adrian Paradis by Telephone: (867) 669-2425 or by E-mail: [Adrian.Paradis@aandc-aadnc.gc.ca](mailto:Adrian.Paradis@aandc-aadnc.gc.ca).

Sincerely,

Adrian Paradis

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**NT 699725**

June 26, 2015

Mr. Willard Hagen, Chair  
Mackenzie Valley Land and Water Board  
7<sup>TH</sup> FLOOR – 4910, 50<sup>TH</sup> AVE., PO BOX 2130  
YELLOWKNIFE, NT X1A 2P6

**RE: Water Licence MV2012L8-0010 – Air Quality Reports for the Week of June 27, 2015**

Dear: Mr. Hagen,

This report is meant to satisfy commitments made in the May 21, 2013, responses to review comments on the roaster plans. Our commitment was to provide weekly summaries of the following data:

- PM<sub>10</sub> measurements captured by the contractor and the fence-line program;
- All other available and quality assured data, including TSP, trace elements (metals) and asbestos data.

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Sincerely,



Adrian Paradis  
Regulatory Manager  
Giant Mine Remediation Project

c.c.: Distribution List